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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZIMMERMAN, GLENN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,328

Applicant(s)

SANO ET AL.

Examiner

Glenn Zimmerman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 20, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

The oath or declaration is defective because: The applicant has checked the "priority not claimed" boxes in the declaration it is believed in error. The reasoning being as the applicant has sent the office the two priority documents mentioned. Also paper six 3/26/01 states that you are claiming priority.

Claim Objections

Claims 2,3 and 6 are objected to because of the following informalities: In claim 2 line 3, the examiner suggests changing "a pair" to "the pair". In claim 3 line 3, the examiner suggests changing "a pair" to "the pair". In claim 6 line 6, the examiner suggests changing "a pair" to "the pair".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1, 4, 5, 10-12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Komaki et al. U.S. Patent 6,236,160.

Regarding claims 1 and 11, Komaki et al. disclose a plasma display apparatus **(title)** comprising: a plurality of display element electrodes each constituted of a pair of electrode segments **(T-shaped electrode projecting portions Fig. 1 ref. 3a)** having linear edges opposing each other, with a predetermined distance provided therebetween, the width of each of the electrode segments becoming narrower in the direction away from the associated one of the linear edges **(ref. 3a)**;

A front substrate **(glass substrate on the display screen side Fig. 2 ref. 1)** on which the plurality of display element electrodes are arranged along the row direction and the column direction **(Fig. 1)**;

A barrier structure **(ribs or partitions ref. 12 and/or second ribs ref. 9)**, the inner surfaces of which being disposed along the outer ends of the plurality of display element electrodes and thereby defining a plurality of cells each of which is to be activated by the associated one of the plurality of display element electrodes so as to emit light **(col. 6 lines 49-56)**; and

A back substrate **(glass substrate on the back side Fig. 2 ref. 2)** disposed opposing the front substrate with, the barrier structure therebetween.

Art Unit: 2879

Regarding claims 4 and 12, Komaki et al. disclose a plasma display apparatus according to claim 1, wherein the barrier structure comprises a plurality of separate units which define each of the plurality of cells so as to provide an evacuation channel structure (**Fig. 2 space between the two reference 9s**) in between the plurality of separate units.

Regarding claim 5, Komaki et al. disclose a plasma display apparatus according to claim 1, wherein the width of the barrier structure is varied (**Fig. 2 space between the two reference 9s and ribs or partitions ref. 12 and/or second ribs ref. 9**) in accordance with the width of each of the plurality of display element electrodes so as to define a channel passing through the plurality of cells in the column direction.

Regarding claims 10 and 14, Komaki et al. disclose a plasma display apparatus according to claim 1, wherein each of the plurality of cells is provided with a reflecting layer (**white dielectric layer ref. 8; also MgO protection layer ref. 6**) disposed below a phosphor member. A white dielectric layer would clearly reflect light. MgO is a known reflector of visible light.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki et al. U.S. Patent 6,236,160.

Regarding claims 2, 3 and 6, Komaki et al. disclose the claimed invention except for the limitation of electrode segments each having a semielliptical or semicircular shape. It has been held that a change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). *In re Daily*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). It would have been obvious to one having ordinary skill in the art to have electrode segments each having a semielliptical or semicircular shape, because changes in size or shape are within the skill of the art.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki et al. U.S. Patent 6,236,160 in view of Kim U.S. Patent 5,384,514.

Regarding claim 6 in combination with rejection of 6 above, Komaki et al. teach all the limitations of claim 6, but fail to teach wherein the barrier structure is formed in a lattice pattern. Kim in the analogous art teaches a wherein the barrier structure is formed in a lattice pattern (**abstract**). Additionally, Kim teaches incorporation of such a lattice structure to improve the prevention of cross-talk (**abstract**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a lattice barrier-structure in the PDP of Komaki et al. since such a modification would prevent cross-talk as taught by Kim.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki et al. U.S. Patent 6,236,160 in view of Shinoda et al. U.S. Patent 5,661,500.

Regarding claims 7 and 8, Komaki et al. teach all the limitations of claim 7, but fail to teach address electrodes each locally disposed, with respect to the row direction, from the center of the associated column of the plurality of cells as viewed perpendicularly to the front substrate and the back substrate. Shinoda et al. in the analogous art teach address electrodes each locally disposed, with respect to the row direction, from the center of the associated column of the plurality of cells as viewed perpendicularly to the front substrate and the back substrate (**address electrodes Fig. 4 ref. Aj**). Additionally, Shinoda et al. teach incorporation of such an address electrode to improve the structure by selectively illuminating the unit luminescent area (**col. 7 lines 19-21**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use address electrodes from the center column in the PDP of Komaki et al. since such a modification would allow for selectively illuminating the unit luminescent area as taught by Shinoda et al.

Regarding claim 8, Komaki et al. teach all the limitations of claim 8, but fail to teach wherein the height of the barrier structure is made 130 μm or higher. Shinoda et al. in the analogous art teach a wherein the height of the barrier structure is made 130 μm or higher (**col. 11 lines 46-50**). Additionally, Shinoda et al. teach incorporation of such a height to improve the structure by alleviating the shock by ion bombardment during discharge (**col. 11 lines 49-52**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a 130 μm barrier structure height in the

Art Unit: 2879

PDP of Komaki et al. since such a modification would alleviate the shock by ion bombardment during discharge as taught by Shinoda et al.

Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki et al. U.S. Patent 6,236,160 in view of Shinoda et al. U.S. Patent 5,661,500 and Kim et al. US Patent 6,137,227

Regarding claims 9 and 13, Komaki et al. teach all the limitations of claim 9, but fail to teach further comprising a plurality of dielectric projections formed on the plurality of address electrodes, each of the plurality of dielectric projections facing predetermined one of the pair of electrode segments constituting the associated one of the plurality of display element electrodes. Kim et al. in the analogous art teach further comprising a plurality of dielectric projections formed on the plurality of address electrodes, each of the plurality of dielectric projections facing predetermined one of the pair of electrode segments constituting the associated one of the plurality of display element electrodes **(dielectric layer Fig. 1 ref. 3 or Fig. 3 ref. 34 or Fig. 4a ref. 64)**. Additionally, Kim et al. teach incorporation of such a dielectric projection facing predetermined one of the pair of electrode segments constituting the associated one of the plurality of display element electrodes to improve electrical insulation of the address electrode **(col. 1 lines 35-45)**.

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the dielectric projection in the PDP of Komaki et al. since such a modification would improve electrical insulation of the address electrode as taught by Kim et al.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanazawa et al. U.S. Patent Application Publication 2002/0027412 disclose a Plasma Display Device. Matsumoto et al. U.S. Patent 6,400,081 disclose a Position Alignment Structure for Plasma Display Panel. Takagi et al. U.S. Patent 6,376,986 disclose a Plasma Display Panel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (703) 308-8991. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is n/a.


Glenn Zimmerman
September 20, 2002


ASHOK PATEL
PRIMARY EXAMINER